

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

Claims 1 - 17. Cancelled

18. (New) A method of controlling access to a Static Random Access Memory (SRAM), the method comprising:

providing a set of queues that store queue entries for requests received from multiple programmable processors, the set including:

a read queue to queue read requests; and

an order queue to queue ordered requests; and

consecutively servicing chained requests in a one of the queues before servicing another one of the queues.

19. (New) The method of claim 18, wherein the set of queues comprises a read lock fail queue to store queue entries for requests to locked memory.

20. (New) The method of claim 19, further comprising consecutively servicing requests in the read lock fail queue until an entry is encountered that remains locked.

21. (New) The method of claim 18, wherein the set of queues further comprises a read/write queue to store queue entries for memory requests received from a core processor.

22. (New) The method of claim 18, further comprising receiving packets via at least one media access controller (MAC).